



# *Get the Most out of your* **Home PC**

*by*  
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*PC Guide* is the complete magazine for PC newcomers. Each month we explore what you can do with your PC and we provide the software you need to do the job – and we do all this without bombarding you with jargon. Essentially, *PC Guide* is the first computer magazine for non-computer people.

*PC Guide* is available with a cover-mounted high-density disk or with a CD-ROM, both of which include working versions of the very best PC applications, utilities and games.

This book is free with the January 1996 issue of *PC Guide* on the condition that it shall not, by way of trade or otherwise, be lent, sold, hired out or otherwise distributed without the publisher's prior consent, in any form.

# Foreword

When we launched *PC Guide* back in June 1995, the ambition was to make the PC easy to use. Ads in the Sunday supplements and in new television commercials were beginning to attract a new type of person to the PC. Since then, there's been an all-out assault on families and people who once wouldn't have been seen dead with a computer in their home. Forget the anoraked propeller-heads, today's PC manufacturers want your average man in the street to invest in a PC. Even the TV ads are more akin to efforts by Nike or Rover than they are to Persil or Daz. We're being sold visions of a computerised future with educational software teaching our kids how to spell and count better than the local primary school, multimedia software informing us better than the local library and the Internet letting us communicate with the whole world, better than Royal Mail or BT can. If you don't join in now you can easily feel like you're living in some kind of third world sub-culture.

But once you've been sold on the idea of getting computerised, the big stumbling block comes as soon as you get your PC back home. While marketing managers are all very good at selling us their dream of what the PC **SHOULD** be, the PC developers aren't too great at making it easy to use. Once you let daylight on to your new purchase, you realise that just because you fathomed the video recorder in a week,



that doesn't mean you'll ever get to the bottom of the PC.

The aim of *PC Guide* and of this book is to show you how to overcome common problems and open your eyes to the new and amazing things you can do with this system of yours. The TV ads are very good at showing what you can do, but they're not so very good at showing you *how*. With chapters on everything from choosing your new PC to upgrading it, and a glossary at the back to throw some light on those confusing computer terms, you're holding all you need to get the most out of your PC. And believe me, it might seem a bit of an uphill battle at first but it's worth it in the end – you'd be amazed at how people are using PCs in the home.

Since the first issue of *PC Guide*, we've regularly invited readers to write in with details of how they're using their PC and often these stories have been turned into features inside the magazine. Such tales are evidence that the PC really is a powerful tool – once you know what you're doing. For example, one reader contacted me to tell me that his daughter had used the Internet to research a school project on the Death Penalty. She never set foot in the public library, unlike all her colleagues. Then we took a look at the Barrows family, who are now using the PC to run their lives – it's replaced the answering machine, their cookery books, all the family archives; they've even linked up to Gran's computer so they can help her out when she gets lost configuring her system. In another article, a mother related how she got her children to learn about animals with the aid of a variety of CD-ROMs. Many of the articles are inspiring. If, after reading this book,

you find that the PC changes *your* family life, write and let us know – you never know, it could be your mug staring out of the magazine next month.

Mark Higham,  
Editor, *PC Guide*.

## Want help?

Each month we answer readers' problems through the pages of *PC Guide*. If you want help, send your queries to:

**Q&A, PC Guide, 30 Monmouth Street, Bath, Avon, BA1 2BW**

or e-mail [pettengale@futurenet.co.uk](mailto:pettengale@futurenet.co.uk)

And if you've got a story to tell us regarding your use of the PC, or you have a comment on the PC industry, then we want to hear from you. Write to the Editor at:

**Feedback, PC Guide, 30 Monmouth Street, Bath, Avon, BA1 2BW**

or e-mail [mhigham@futurenet.co.uk](mailto:mhigham@futurenet.co.uk)

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# *Chapter 1*

# **The hardware**

**N**ot all software will run on all PCs. As the PC has developed into a powerful tool, the hardware (the actual electronics) has developed too, becoming more and more advanced and, in turn, becoming capable of more and more in terms of the software which it can run. In line with the hardware advances, the demands of software have increased – instead of 2Mb of memory, you now need 4Mb to run X piece of software; instead of consuming 5Mb of hard drive space, a program gobbles up 40Mb... We're now in a situation where, to run the latest software, you've got to have the most advanced hardware connected to your PC. It therefore makes a lot of sense to know exactly what hardware your PC is kitted out with – that way, when you look at the boxes of software and at the list of minimum hardware requirements, you know whether your machine is able to run it or not.

In this chapter I start by taking a look at some fairly typical minimum system requirements. After scouring the PC Guide office for five minutes it was easy to pick up a broad range of software with a broad range of requirements. We'll show you what the terms mean, and how they relate to the kit you've got. We'll then delve deeper into the metal box that is your PC, examining each piece of hardware it contains so that you're never confused by the technical jargon again.

## **Buying the software**

Whenever you come to buy a piece of software you'll notice labels stuck to the side advertising the minimum system

specifications. These are the minimum requirements your PC needs for you to be able to run the software. Some examples of these labels are...

**On the CD-ROM version of the kids' game *Sim Town* the minimum requirements are listed as:**

- IBM 386 DX & above
- SVGA, 8Mb RAM, CD-ROM
- disk drive & mouse required,
- Windows 3.1 or later,
- supports Windows sound.

**Then on Microsoft's reference title, *Bookshelf '95*, the requirements are listed as:**

- A multimedia PC with a 386SX 25MHz or higher processor
- MS-DOS operating system version 3.1 or later and Microsoft Windows operating system version 3.1 or later
- 4Mb of memory and at least 4.5 Mb of available hard disk space
- CD-ROM drive
- Audio board and headphones or speakers (recommended)
- Super VGA 256-color monitor
- Microsoft Mouse or compatible pointing device

And if you thought that sounded complicated enough, check out the text on the box of the golf simulation *Links*. Admittedly, *Links* is an older game, hence the more unusual requirements:



## PC & Compatibles 3.5" Disk

- VGA or MCGA
- 640k
- hard disk
- a mouse is strongly recommended
- Extended and expanded memory
- Real sound, AdLib, IBM PS/2 speech Adapter and SoundBlaster Supported
- High Density Disk Drive Required

Isn't it great? With phrases like 'Real sound' and 'MCGA' scattered around, it's a wonder anyone walks out of a store with anything under their arm. The thing is, many of these terms have been around for ages and probably don't even apply to you. For example, you can't even buy a PC nowadays that doesn't come with an SVGA (or Super VGA) screen. Under the Links listing you're told that you need at least a VGA or MCGA screen – well, SVGA screens are a step up from VGA and MCGA so your screen is fine. Complicating things still further is the terminology publishers use – Microsoft says an Audio Board is required to run Bookshelf. Other publishers talk about needing a soundcard – they're the same thing but it can be confusing when you're first confronted with all this terminology.

### *So what does it all mean?*

Here's a breakdown of some of the terms you're likely to encounter when buying a piece of software. Always seek out

the minimum system specs for any piece of software – they should be clearly displayed, usually on the spine or back of the packaging. Confirm that the store will take your goods back. Even if you've got all the minimum system specifications you need, you may still find software won't run properly if memory's tight.

## **The processor**

This is the heart of the PC and, as you'd expect, processors have become faster and faster as the years have gone by. They started with the 8086, moved on up through the 286 and 386 to the 486. Then a court case ruled that Intel couldn't copyright a number so the processor name changed to Pentium after that. The very latest (and still out of reach for most of us) is the Pentium Pro...

As ever, things couldn't be that simple. There are different processor speeds, too. A 386SX has a processor speed of 12 to 33MHz, a 386DX has a speed of 20 to 40MHz. This works the same with a 486, which also comes as both a 486SX and 486DX.

In the Bookshelf example above, "Multimedia PC with a 386SX 25MHz or higher processor" means that you need a PC with a 386SX processor.

Don't worry about the "Multimedia" bit – any PC with a CD-ROM drive and a soundcard is considered to be a multimedia PC. Later in the chapter we take a close look at what all these different numbers and acronyms mean.

## Memory

The more of this you can get your hands on, the better. The amount of required memory is measured in MegaBytes (Mb) or Kilobytes (K). Memory is also known as RAM (Random Access Memory). In the above examples, Sim Town requires 8Mb of memory and Bookshelf '95 requires 4Mb of memory. Most PCs nowadays come with about 4Mb of memory installed but it's easy (and relatively cheap) to add additional memory – see Part IV. In the Links example above, the simulation requires just 640K of memory (1024K is the same as 1Mb). There are several different types of PC memory but unless you've got a really old PC don't worry about the "Extended and expanded memory" bit. Memory is the single most confusing aspect of the PC – you could write books and books on the subject. We've explored memory in more detail later on in this chapter, and we show you how to cope with specific memory problems in Part V.

## Screen display

Easy one this – get an SVGA (or Super VGA) screen and you won't have any problems – unless (why's there always an Unless?) you're running big graphics programs. Hefty graphics software such as 3D rendering programs often require millions of colours or an ultra-high definition screen display. But for most other software, an SVGA card is fine. For the alphabetically-obsessed out there, here's a list in order of the types of screen display that have been around: CGA, EGA, VGA, SVGA.

High-end graphics packages or DTP software may benefit from a high-definition or 17-inch monitor.

## Hard drive space

Once again, this is measured in Mb and K. It's often confused with memory but the two are very different. Memory is the space inside your PC – you have to load a program from your hard drive and into your PC's memory to be able to run it. Most software has to be copied off the CDs or floppy disks it comes on and onto your hard drive before you can run it. This is why you need enough hard drive space to be able to copy (or install) the software onto your PC. If no hard drive space is listed (as in the *Sim Town* example above) then the software probably loads directly from the CD or floppy disk and you don't have to move it onto your hard drive to be able to run it.

The terms "Hard Drive" and "Hard Disk" are technically different (the disk being inside the hard drive itself) but they've become largely interchangeable over the years..

## Sound

This one can be made to look much more complicated than it really is – now there's a surprise. Microsoft has got the right idea, simply saying that an "Audio card is required" (even if the term Audio card is a little confusing). The *Links* example looks very grim, especially with the reference to Real sound – whatever that might be! PCs don't automatically come with a soundcard (or audio card). Soundcards offer a range of

different features and special effects but they are almost all SoundBlaster-compatible, and that's the bit that matters. If you've got one of the specific soundcards in the list, that probably means the software will make use of special effects specific to that soundcard. For example, the SoundBlaster AWE-32 is sometimes listed in the minimum specifications. If you've got one of these inside your machine the software may be able to give you CD-quality surround sound.

Of course, if you don't have a soundcard installed in your PC, that doesn't mean you won't be able to run the software — you simply won't be able to hear any noise.

## **Operating system**

DOS and Windows are both operating systems. Nowadays, most software requires that you at least have Windows 3.1 installed on your PC and since this version has been out for 10 years, it's pretty likely that's the one you'll have. Windows 95 is the latest version of Windows to be released and this differs massively from previous incarnations. Essentially, it combines both DOS and Windows into a single operating system, and it tidies up loads of other things, like some of those troublesome memory problems. Although most titles that work with Windows 3.1 will also work with Windows 95, there are a handful (mostly older ones) that won't.

## **DOS tip**

To find out what version of DOS you're running, type VER when you see the C:> bit on screen. To see what version of

Windows you're running, take a close look at the Windows start-up screen just after you've typed: win [Enter] to get it going. The Windows version number is displayed on this screen. This is the same for Windows '95.

## Monitor

Unless you bought your PC years ago, it probably came with an SVGA monitor and this is ideal for pretty much every application.

## High density disk drive

You can't buy a PC that doesn't come with a high-density disk drive any more. High density (or HD) disks hold twice as much information (1.44Mb) as the older-style floppy disks. Floppy disks used to come in two formats – 5.25-inch disks (which really were floppy) and the more popular 3.5-inch disks you see today.

## CD-ROM drive

CD-ROM drives are getting faster and faster with each passing year. Some software requires that you have a fast CD-ROM drive and nowadays it's possible to buy double-speed, quad-speed and even six-speed (also known as hex-speed) CD-ROM drives. None of the software listed previously mentions any of these terms so any CD-ROM drive will do. That said, multimedia software benefits from a faster CD-ROM drive, particularly with movie clips which can move too slowly if your CD-ROM drive isn't fast enough.

## *Chapter 2*

# **The Internet**

**1994** was a big year for the Internet. Before then, most people hadn't even heard of the Information SuperHighway. Then newspaper stories and magazine launches such as .net realised the potential of this global connection of computers and all hell was let loose. Now we've even got TV shows about the Internet and a whole Internet section in the news-stands at WH Smith. It's everywhere.

## **Surfing the Net**

.net magazine was Britain's first in-depth guide to the Internet. It's still the best-selling Internet magazine, giving readers a monthly insight into the most interesting sites you can find on the Internet.

The Internet is quite simply a link between computers all around the world using telephone and satellite systems. Software and information is passed between these computers (not all of which are PCs), thus forming an extremely advanced communications system. To benefit from the wealth of information out there, you can plug your PC into this network of computers and it's not as difficult as you might think – the link is already in place. Using the telephone system and a device known as a modem, your machine phones up the nearest huge computer which acts as a gateway into the global system. It's just like asking the operator to connect you to another phone somewhere around the world for the cost of a local call.



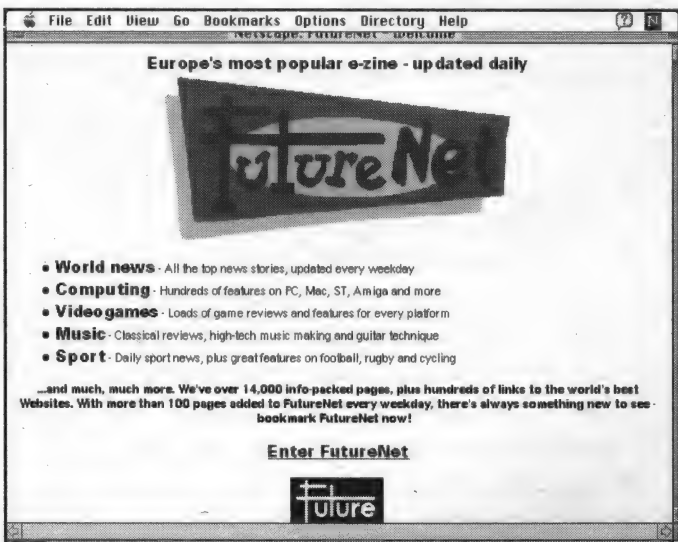
## *What's on the Internet?*

Have you got a few hours? The information contained on the Internet is vast. Anything you want is available. In fact, the biggest problem with the Internet is that there's so much information you usually get waylaid on your search for it. Check out this list of some of things you might find, all for the cost of a local telephone call...

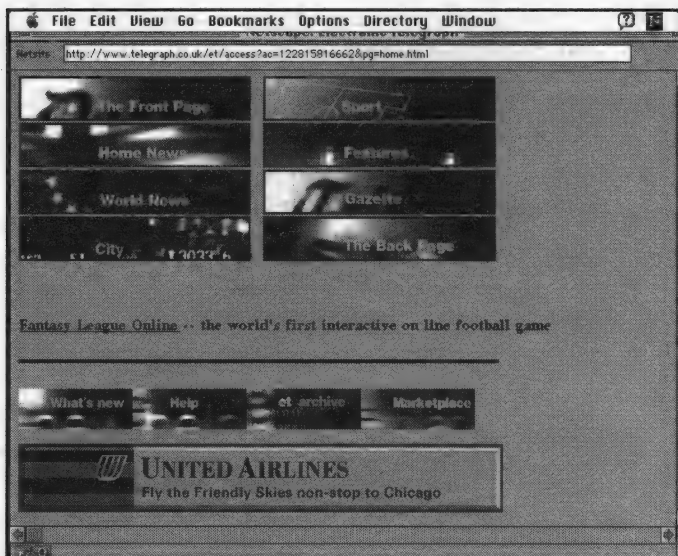
- News databases, updated as the news happens. These can come from anywhere in the world, depending on what you want to read about. Newspapers often have sites on the Internet, giving you access to the content of their latest editions. Everything from The San Francisco Bay Times to the Daily Telegraph (a site known as the Electronic Telegraph) can be found. And if it's old news you want, they usually offer you access to old editions, too.
- Your favourite magazines, including PC Guide. Future Publishing is just one of many publishing companies who put magazines onto the Internet, offering you the opportunity to look at features and articles on a whole range of subjects and giving you the chance to talk back and say what you think. Often competitions and articles appear exclusively on the Internet which don't make it into the printed version of the magazine. Take a look at <http://www.futurenet.co.uk>
- Vast databases of information on any subject you can possibly think of (in the Foreword I mentioned one of our readers whose daughter used the Internet to research her

GCSE project on capital punishment). This isn't just limited to words either, pictures and music are also on the Internet. Prince – sorry, the artist formerly known as Prince – has even said that he envisages a future where music is distributed on the Internet so you can load an entire album onto your PC from the Net.

- **Clubs.** Everything from Star Wars movies to mountain biking and from Arabic culture to building transistor radios, every subject you can possibly imagine is supported by a 'newsgroup' on the Internet. And you don't just sit back and idly read things either, you can talk back.



FutureNet is Future Publishing's website. Explore articles from a host of magazines ranging from needlecraft to video gaming\*. PC Guide's website is located on FutureNet.



The Electronic Telegraph is an on-line version of the daily newspaper. The Internet site offers a selection of stories and the opportunity to browse through older issues.

- Weather, including everything from your local weather forecasts to predictions in climate changes over the next decade! There's even a site that provides a photograph of the sky taken from the rooftop of a hotel in San Francisco. The picture is updated every five minutes to bring you the very latest view. It could only happen in America, eh?
- Tons of free software is available on the Internet. Computers in universities, colleges, workplaces and even government agencies are able to give away software over the Internet to anyone who wants it.

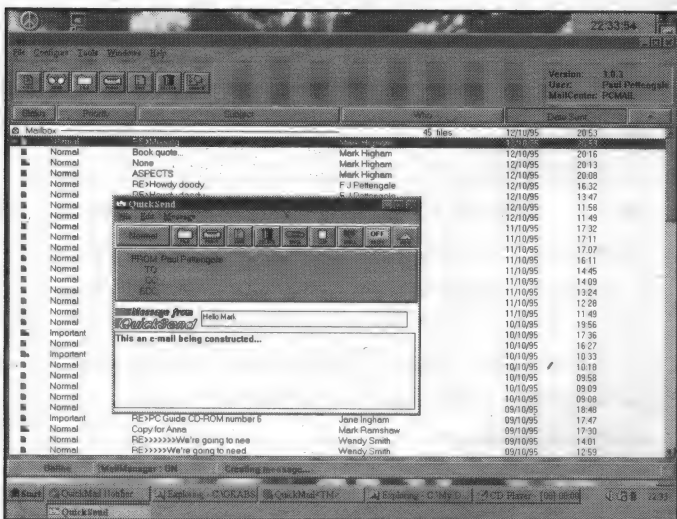
## Internal or external modem?

There are two different types of modems. External modems are little black boxes with a string of lights at the front to let you know what your machine's up to. There are also internal modems which, as you might expect, fit inside your PC.

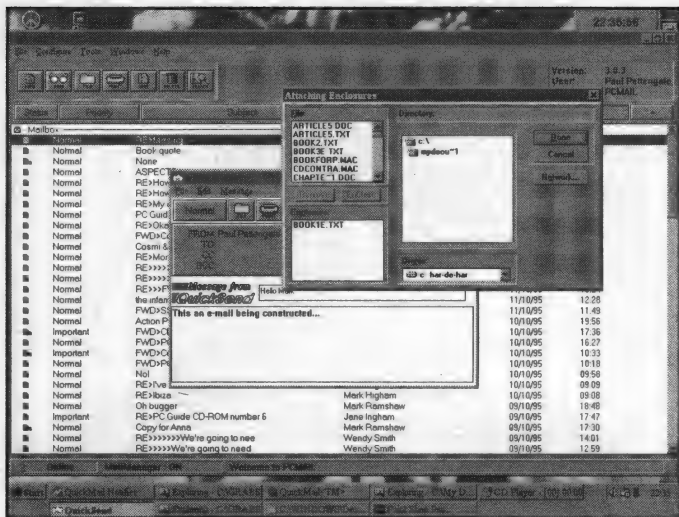
Internal modems tend to be the cheaper option but you've got to lift the lid off your PC and install another card to fit them..

## *And what's all this talk about e-mail?*

You can send messages to anyone around the world – well, anyone who has an e-mail address at least. You've probably noticed that TV shows, magazines and many large companies



One of the advantages of the Internet is the ability to send electronic mail. Here a piece of mail is being constructed.

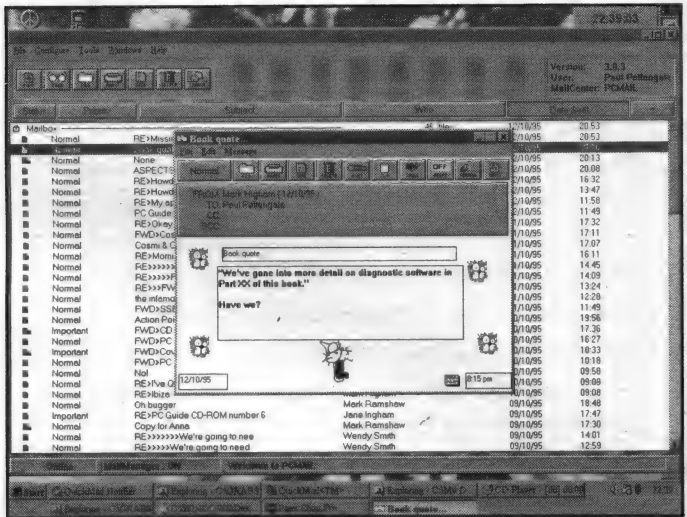


**You can also enclose documents along with your message. Text and picture files (and even sound files) can be enclosed with a document.**

now quote an e-mail address next to their postal address. My own e-mail address is [mhigham@futurenet.co.uk](mailto:mhigham@futurenet.co.uk) and all e-mail addresses come in this form. In the Internet community, the traditional mail service is known as snail mail – and for a very good reason. When you send an e-mail you don't have to worry about stamps or any of that postbox nonsense, you simply sit down at your PC, type up the message, make the call to your nearest computer and off it goes. The message finds its destination within minutes, wherever it is in the world, and waits to be collected.

## Electronic mail

One of the biggest benefits of the Internet is the ability to send



And the message can be read instantly by the intended party. This is why Royal Mail is known as "snail mail" by people on the Internet.

electronic mail, or e-mail as it's known. This is a near instantaneous method of sending mail to anyone anywhere in the world – provided they have an Internet account. With more and more people getting onto the Internet and an ever-increasing number of businesses joining for the speed mail benefits alone, where will this leave Royal Mail?

## What are newsgroups?

Groups known as newsgroups exist like bulletin boards. People from all over the world post messages which can be read by anyone who chooses to look. Thus there are things like Hollywood gossip newsgroups that are bursting at the seams with who's doing what to whom. While the Internet is

covered by existing libel laws, it's very difficult to work out who's responsible for posting messages or disseminating them, thus these groups can be a hotbed of juicy information you could never hope to see printed – remember, though, there may not be a word of truth to any of it. In early 1995 a rumour appeared on an Internet newsgroup that actor Keanu Reeves and film mogul David Geffen had married. Sure, it's a pretty unlikely event, but even so, this juicy little titbit was repeated all around the world until Keanu was forced to deny it in an article in *Vanity Fair* (he pointed out that he was on another continent at the time).

The whole legality issue of the Internet is a difficult one and governments are trying to find ways to censor the information being provided, especially through these sorts of newsgroups. Since it's so easy for anyone to set up whatever groups they like on the Internet, the potential for misuse is massive. Newspaper scare stories have focused on groups for perverts and paedophile rings.

### *What's the World Wide Web?*

The World Wide Web is that part of the Internet which enables you to see pictures as part of the information. Once upon a time, everything appeared in text form – newsgroups are still text-only affairs – but World Wide Web pages can be bursting with pictures, different-sized (and coloured) text and big bold headlines – just like the pages of a magazine. The trouble is that the more pictures that are used, the more space that's required to store the page. Since each page has to be

transmitted down the telephone line, pages which take up more hard drive space are going to take longer to transfer down the telephone line. As a result, it can take several minutes to load a WWW page which has loads of complicated graphics.

Nowadays, the distinctions between the World Wide Web and the Internet have blurred and the Information SuperHighway, the Internet, the Net and the World Wide Web are all regarded as pretty much the same thing. Newspapers often get them all confused.

## Find out what's on TV

To get hold of regularly updated TV listings, constructed in a format which best suits you, point your web browser\* (as they say in the biz) to <http://www.yearling.com>

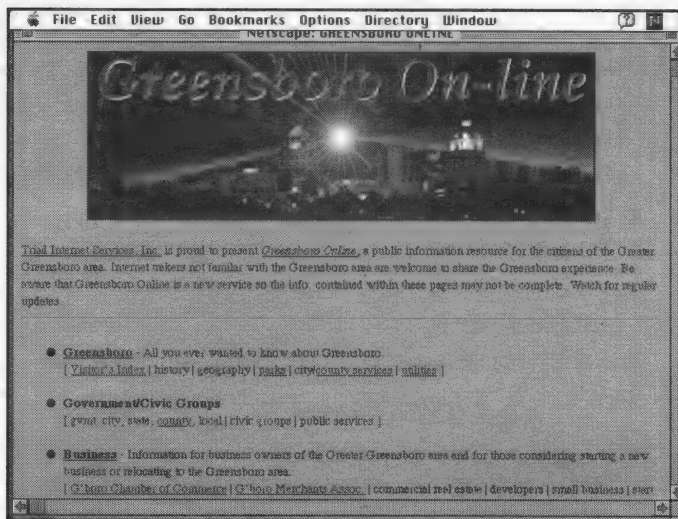
## Wanna play games?

Then check out <http://www.sgi.com/Contests/TheRift/> for a stylish 3D scavenger hunt game. There's a whole heap of silicon graphics hardware on offer for the winner of this awesome game which involves reading a daily clue and then finding the web page it points to. Or check out <http://www.gate.net/~ttt/fruit/> – a curious puzzle game involving citrus fruits – yep, that's right. Made even more bizarre by the fact that you can't win!

## *What's a web site?*

A web site is a bit like a magazine. It has an opening title





The World Wide Web enables you to see pictures and text on screen. Pages from the Internet can be as simple or as complex as the pages in a magazine.

page, followed by a contents page listing what's inside, followed by lots of other pages of information. Future Publishing's web site is called FutureNet and it encompasses articles from all the magazines published by the company. You can access FutureNet at <http://www.futurenet.co.uk>

*It sounds great – why bother with magazines, newspapers and libraries?*

The biggest problem right now is speed. Internet pages can quite easily display lots of fancy full colour photography on your screen, but the information which makes up these great images has to be sent down the telephone line in a digital

format. That means the more complex the pages are, the more information that has to be sent along to your PC. As a result, accessing information on the Internet can be a slow process and pages with lots of fancy but superfluous pictures aren't appreciated.

You can instruct your PC not to show accompanying pictures if you want to speed the process up, but even so, flicking between pages can take minutes rather than seconds. With so many people accessing the Internet, the host computers (those holding the information you're trying to access) are sometimes so busy that you can't get to them and on occasions they take their time sending you what you need. This doesn't make the Internet unusable, not by any means. The future holds the certainty of a better telecommunications system that will enable your PC to talk to other computers at a much faster rate – as more and more people hop onto the Information Super Highway then computers at the other end are going to get faster, too.

## Web site addresses

There are loads of different web sites around – to find them you've simply got to discover their addresses. Magazines like Future Publishing's .net provide features on what's happening on the Internet and draw attention to some of the better sites. Meanwhile the accompanying bi-monthly listings guide, .net Directory, provides a regularly updated guide to thousands of great Internet sites.

To get hold of other addresses, keep your eyes pinned to

the credits at the ends of TV shows or look in the small print of magazine ads – many companies now include their web site addresses alongside their regular address.

E-mail addresses and web site addresses are two different things. An e-mail address is simply a person's individual mailbox. An example one is: `mhigham@futurenet.co.uk`

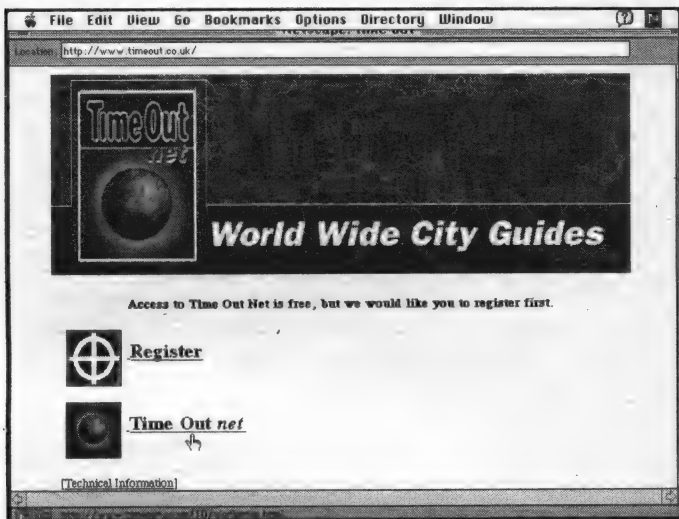
This differs from a web site address which offers the opportunity to look at information the company has chosen to make available. It's easy enough to tell the difference from the addresses because web site addresses don't have the '@' symbol in them.

For example, the FutureNet web site address is:  
`http://www.futurenet.co.uk/`

### *How do I find my way around?*

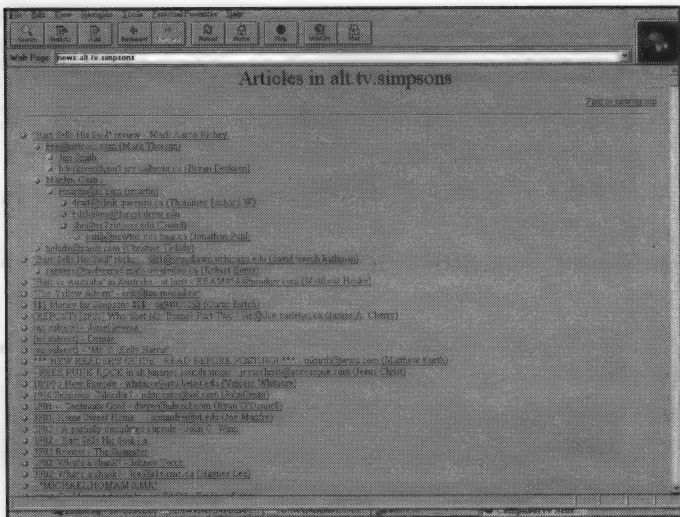
Using things called search engines. These are just like any other web page, except that you enter the information you're trying to find and the computer then goes off and returns with details about documents containing the words you've entered. Different search engines work in different ways, depending on the sort of information you want. There are three main search engines – since searching is such an essential part of finding your way around the Internet you may have to pay a fee before you can use some search engines.

The other way to find your way around is by using hotwords or hypertext links (they're both the same thing). As you browse around the Internet you discover words that appear in a different colour to the rest of the text (usually



See the words highlighted in blue? By clicking on them you're taken off to other pages. This is a web site belonging to Time Out magazine – if you want to get in touch, contact <http://www.timeout.co.uk/>

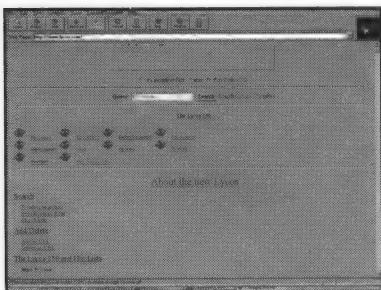
blue). By clicking on one of these highlighted words, you're taken off to another section of the web site or a different web site altogether. Thus, you could be reading about PC Guide while you're browsing around FutureNet and see the words 'Ocean's new games' highlighted in blue. When you click on this word, you're taken off to a web site run by Ocean software where you can browse through its new games line-up. This is how you usually end up spending so long on the Internet. You go there to pick up the latest news and before you know where you are you're loading a music track from 808 State.



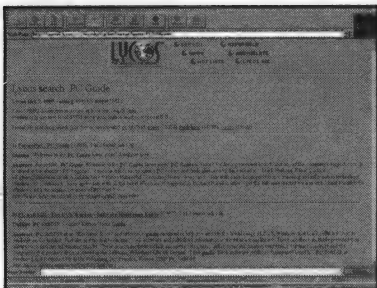
News groups are different to World Wide Web pages because they don't contain any pictures. What they do contain is chat between all the subscribers to a particular group. Anyone, anywhere in the world, can leave a message in a newsgroup.

## Searching the Internet

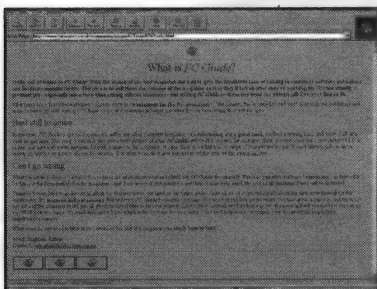
You can scour the Internet for information by using search engines. There are several available and the one you decide to



Using search engines you can enter keywords that you want to find. Pages on the World Wide Web are then scoured for the words you've entered and any that match the criteria you've set can be displayed on screen.



Here's what's returned. Find an entry that best matches what you're after then click on the hypertext link. . .



. . .to go and find the required document. Note that searches should be as specific as possible. There is so much information on the Internet that you can easily be inundated by the number of documents containing your required word.

use depends on the information you want and the format in which you'd like it displayed. Some search engines charge a subscription fee which then entitles you to a password providing you with access to the search engine.

## *How can all this information be free?*

Some web sites operate on a subscription basis but not many. Newspaper services and some weather sites expect you to pay a subscription before they give you access to their full service. Some publishing companies are just beginning to generate revenue by running advertising on the Internet and some Internet sites are being sponsored by corporations. The

Internet could potentially change the way we do everything – there's no reason why one day Prince couldn't disseminate his own music across the Internet with no need for all those marketing middle-men. The same goes for magazines and newspapers. Inevitably, though, the companies getting involved with the Internet will one day have to find some way to generate revenue from Internet sites and there's a lot of talk going on already about possible options.

### *So what do I need to get involved?*

You need a modem to be able to link your PC up to the telephone network and you need to find an Internet provider whose system you can call up to get onto the Internet. All this Information Super Highway nonsense sounds a bit complicated but it's pretty easy to get on-line. Companies now sell everything you need in one box for around £250.

### *What software do I need?*

To look at pages on the Internet you need a piece of software known as a web browser. This interprets the information you receive from the Internet and displays it on screen in the format that was intended – that's how you get to see pictures and photographs. The software is given free by the Internet provider.

### *What are the hidden charges?*

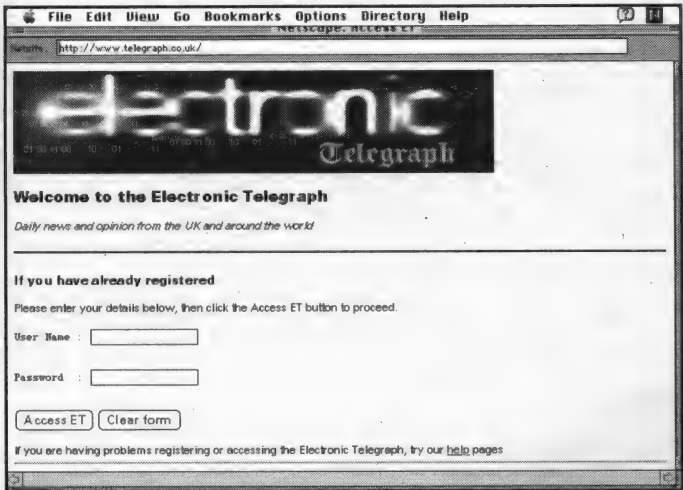
Obviously you have to pay for all the time you spend on a local telephone call and this can easily be an hour at a time,

especially if you're easily distracted by weird web sites (and there are plenty of those). The other cost is a monthly fee from your Internet provider. An Internet provider maintains a super-fast link (usually by fibre optic cable) on to the Information Super Highway – hence the monthly fee.

The good news is that telecommunications services are now offering excellent local call rates – especially for calls made outside of working hours or during the weekends.

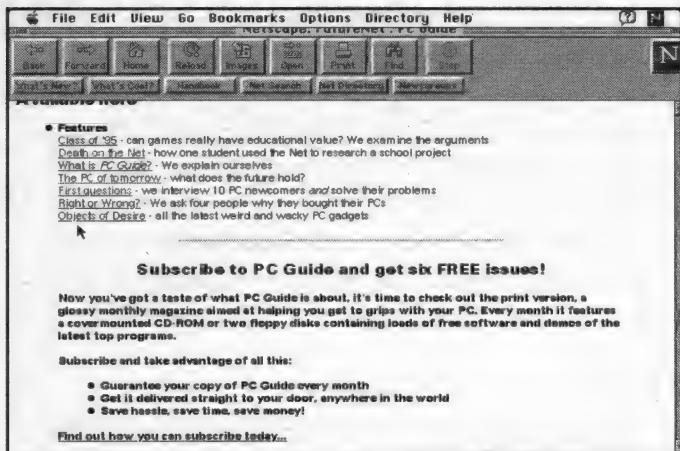
### A peek around the Internet

With access to computers all around the globe, there's a host of weird and wonderful things to discover on the Net.

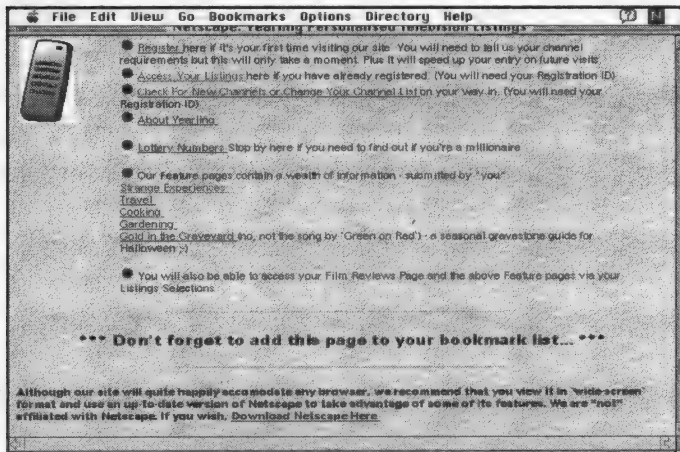


Here's the front page from the Electronic Telegraph, a site operated by the Daily Telegraph, which reveals their latest edition. Interested? Contact: <http://www.telegraph.co.uk>





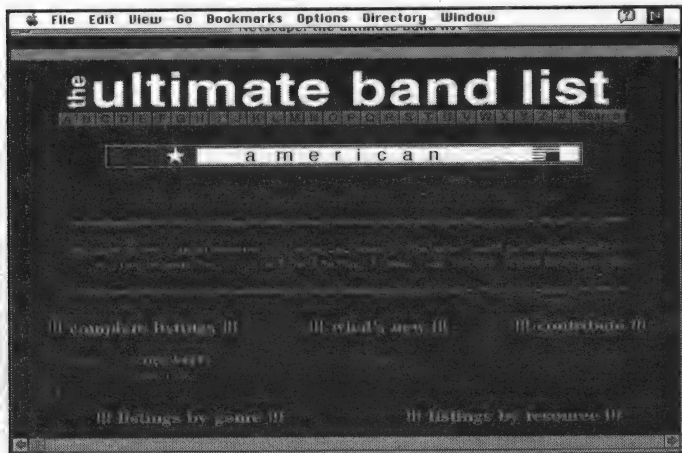
And here we take a look at the PC Guide section of FutureNet. Many magazine and publishing companies have sites on the net. Interested? Contact: <http://www.futurenet.co.uk/>



Curious what's on TV tonight? Check out the Yearling site for a listing of all the week's upcoming schedules. Interested? Contact: <http://www.yearling.com>



Find out what the weather in San Francisco's like. This site shows photos, updated every five minutes, of the view of the skyline in San Francisco. Interested? Contact: <http://www.kpix.com/faircam/>



Fancy some music? This American Internet site offers everything from techno to country and western. Interested? Contact: <http://american.recordings.com/wwwofmusic/ubl/ubl.shtml>

## Internet providers

To gain access to the various aspects of the Internet you have to subscribe to a provider service. These providers give you a telephone number to ring using your modem. On the other end of the line is a large computer which acts as a gateway to other machines around the globe. Prices start at around £12 for unlimited Internet use. There are many Internet providers around. If you're interested, try some of these. . .

### **BBC Networking Club**

Charges £25 set-up, £14.10 per month.

Call 0181 576 7799

### **CityScape Internet**

Charges £180 yearly for basic set-up.

Call 01223 566950

### **Demon Internet Ltd.**

Charges £14.69 set-up and then £11.75 monthly.

Call 0181 371 1234

### **Easynet Ltd.**

Charges £25 set-up and £11.63 monthly.

Call 0171 209 0990

### **Internet UK**

Charges £11.75 monthly.

Call 01827 713967

# *Chapter 3*

## **Reference works**

**M**ultimedia splits off into many different sections nowadays. The ability to use video sequences and CD-quality sound is a feature that's been utilised by all types of different software.

Games are now turning into something more akin to interactive movies (even Steven Spielberg is involved in the production of a game – called *The Dig*). Educational software is so much fun to watch and play with that even adults can get into it – I've spent hours playing around with titles from The Living Books range, aimed at the under-10s.

Reference works have only really been made possible (at least in terms of offering anything more than the text of an encyclopaedia) with the advent of multimedia.

Best of all, the really innovative stuff that's taking computers to new realms is all coming about as a result of multimedia.

It was the sudden affordability of CD-ROM drives which spawned the home multimedia market. With the massive storage capabilities of CD came the ability to include video sequences and CD-quality stereo sound – and suddenly the PC's popularity with reference works took off. The PC could now turn encyclopaedias into something fun to explore – that's why educational software has benefited so well from the multimedia revolution.

Imagine an encyclopaedia that can show you video sequences, or play you one of Hendrix's hits when you look up Woodstock. It's a trend that's only going to see software quality and diversity increase.

### *What sort of things are available?*

Just like a library, you have CD-ROMs covering a diverse collection of subjects (such as encyclopaedias) and then you have other ones that get far more specific. For example, there are CD-ROMs about wild animals, zoo animals, and even the livestock inside the San Diego zoo. For more frivolous affairs, you can browse through the life story of Marilyn Monroe, as viewed by a Hollywood gossip columnist – all accompanied by video and sound clips. Or maybe you'd rather hear Kevin Costner narrate the story of the North American Indians in an interactive exploration of 500 nations of Indian tribes? And if that's not your sort of thing, what about the background story of Romeo and Juliet with speech and video from the BBC production unit complementing text taking you all the way from Tchaikovsky to Gielgud – even if you can't stand Shakespeare, you can't help but enjoy diving here, there and everywhere to watch video clips from different performances.

To give you an idea of some of the range and diversity of the multimedia releases out there, we'll offer a glimpse at a handful of different releases.

### *How much does it cost?*

Prices start at around £30 and shoot way up into the hundreds, often depending on the amount of information contained on them. Sometimes multimedia titles, particularly reference works, come on more than one CD-ROM. Microsoft is the biggest player in the multimedia market and it has established its Microsoft Home label under which it just seems

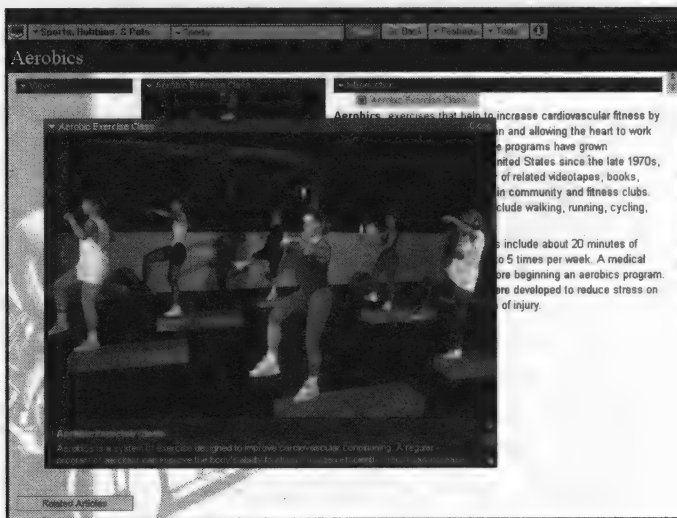
to churn out a non-stop supply of excellent reference works exploring every subject you could imagine.

## Encarta

**Encarta '96** is the latest version to date.

**Contact:** Microsoft, 03445 002000

Microsoft rules the roost with this awesome encyclopaedia. You can easily spend hours exploring the entries. Microsoft has taken the contents of a 28-volume encyclopaedia and connected it all together with the aid of your PC. **Encarta '95** contains over nine million words, accompanied by top quality photos, sounds and nearly two hours of video and animation. Hypertext links (highlighted text that takes you off to another



**Encarta is the definitive multimedia encyclopaedia.**

entry when you click on the word) guides you on an in-depth tour. Some PCs are being bundled with copies of *Encarta* – count yourself lucky if you can get one. Other encyclopedias exist, the most notable of which are *Grolier's Multimedia Encyclopedia*, *Hutchinson's Multimedia Encyclopedia* and *Comptons Encyclopedia*.

### **Haight Ashbury In the Sixties**

Around £40

**Contact:** Channel, 01703 812755

The Haight Ashbury scene lends itself well to multimedia, drawing on the best in music, writing, and erm, atmosphere. The designers clearly passed the acid test with images swirling and melting to the strains of Jefferson Airplane.



Multimedia titles give you a wealth of things to explore. Here the 60s hippy explosion in San Francisco's Haight Ashbury area is explored.





### Big Bad Wolf?

Would werewolves scare us if we didn't suspect a bit of truth in those tales of daylight human becoming moonlight wolf? DNA tests of exhumed bodies give evidence of a rare genetic disorder that causes abnormal hair growth, sensitivity to light, and a lack of iron remedied by drinking blood. Where were the bodies found? Transylvania, of course.

Microsoft has established its Home label, under which is releases a non-stop supply of reference titles, including *Microsoft Dogs*.

## Microsoft Dogs

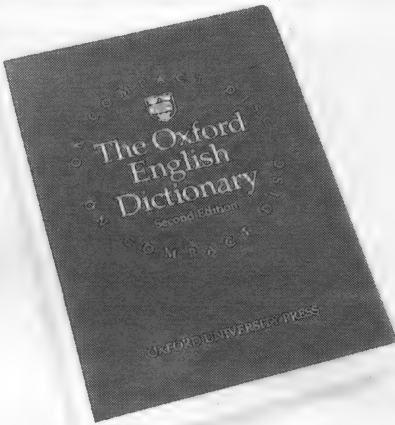
Around £30

**Contact:** Microsoft, 01734 270001

Microsoft's high production values of acres of white space, sharp photography and in-depth research are still apparent even in its smaller titles. Text links lead you to choose your intended dog, trace its origins, and – courtesy of such luminaries as Gula, the ancient wise woman – discover the rôle of dogs through the ages. This holds your interest by its sheer depth.

## Oxford English Dictionary

Priced in the region of £500



It might look dull until you realise that all 21 volumes of the *OED* are crammed onto one little CD-ROM.

**Contact:** Oxford University Press, 01865 267979

Here's proof that sound and video aren't the only way to utilise the vast storage capacity of CD-ROM. Oxford University Press has managed to cram all 21 volumes of the *Oxford English Dictionary* on to one CD-ROM, and the end product is superb. Half a million definitions and over two million quotations can be accessed effortlessly, saving you hours of time. The ability to click on highlighted text means you can flick through the dictionary in no time. Even if you don't have a PC, the cost of this product and the multimedia system you need to run it on, is still cheaper than buying the printed version of the *OED*.



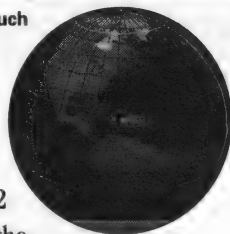
Video clips and 3D fly-throughs make *3D Atlas* much more than just another atlas.

## 3D Atlas

Around £65

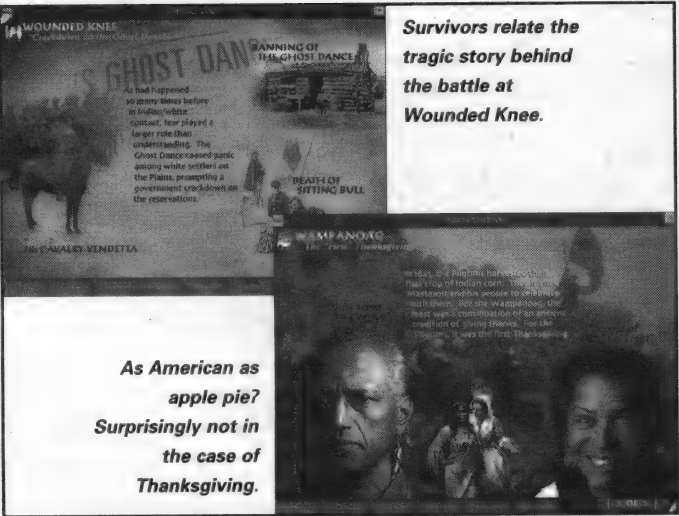
**Contact:** Electronic Arts, 01753 549442

This might not come with a free round-the-world ticket, but it probably comes about as close as you can get on a PC. This atlas takes you all around the globe and includes video clips and full screen fly-throughs. There are 12 3D globes, research stats and up-to-date information – *3D Atlas* even passes the Bosnia test that trips up most atlases.



## 500 Nations

Around £30



Professional movie folk are getting involved in CD-ROM, too. Here Kevin Costner guides you through the trials and tribulations of the North American Indians.

**Contact:** Microsoft, 01734 270000

Microsoft has chosen to adapt an American TV series called – yep, you guessed it – *500 Nations*. Kevin Costner guides you through the story of the North American Indians with diagrams and video sequences explaining how tribes from the Aztecs to the Apaches once spanned the entire US. A detailed study of the Aztec and Mayan civilisations that preceded the North American tribes is visually stunning. Lush illustrations are backed by computer-generated 3D fly-bys. Likewise, the options of Timelines, Pathfinders, Storytellers and Homelands all take you on spoken word-based tours of ancient ceremonies and needless massacres.

# *Chapter 4*

## **Education**

**W**e'll probably get shot for saying it, but educational software was once the place where bad software programmers went to die. With dubious educational benefit and a distinct deficit in the visual imagination stakes, children were always going to be happier sat in front of the television than the PC. CD-ROM has changed all that. Educational software has seen some of the most creative uses of multimedia technology and far from being a chore to use, kids actually enjoy using the programs available. The surge of educational software has also coincided with a surge in parents' interests in the idea that computers can make good teachers. We wouldn't go along with the idea that to be a good parent you have to own a PC and a range of educational software but we've certainly seen enough great educational stuff to know that we'd have enjoyed learning if only it had been around when we were kids.

## **Age differences**

Check the age specifications on any educational software title and don't necessarily dismiss a title if it doesn't appear to be aimed at children. There are many packages that can entertain even though they may not be specifically geared towards kids – Microsoft's Encarta CD-ROM is an encyclopaedia but with video and sound samples used liberally throughout, it can be loads of fun to explore. Contact Microsoft on 01734 270000.

*What type of software is available?*

There's more going on in this area of multimedia than any

other so it's changing all the time. Besides the obvious mathematical problem-solving games and spelling tutors tied in with the curriculum, there's also software that teaches less obviously. Animated storybooks are particularly popular.

Aimed at anything from three to nine year-olds these comprise pages of a book that animate when you click on certain areas. They teach by drawing attention to the words and the spelling and showing animations which demonstrate the meaning of the word.

The most popular of these is the Living Books series of titles. Then there's story-making software which encourages kids to piece together and tell stories by building up their own animations from a varied range of movie clips and sampled sounds (or they can provide their own sounds using a microphone). There's also a variation on this which enables children to prepare their own plays which then can then put on to an admiring public.

### *How much can I expect to pay?*

Educational multimedia is in the middle of a bit of a revolution as far as software pricing goes. With so many publishers jumping onto the educational bandwagon, the competition has become quite intense and prices have tumbled to as low as £19.99. It's certainly worth shopping around, and don't be convinced by price alone. In the software market, it isn't necessarily true that you get what you pay for – good software can come cheaply. Don't be swayed by the quality of packaging, either. Ideally you should check

out a few reviews before parting with your cash, but if that's not possible then ask to see a demo or confirm that you can return the product if it's not what you want.

### *Anything else I should watch out for before parting with my cash?*

Yes. Check that you're buying an Anglicised product. Or at least be aware that what you've got may contain American spellings, words or phraseology. With multimedia already such a big area in America, some of the best ground-breaking software is coming in from America. The European market is so big that it now justifies Anglicising many titles, but that doesn't mean all publishers oblige. Expect things to only get better. This obviously isn't a problem with mathematical software but it's a tad unfortunate if you're trying to teach spelling.

### *What are the Living Books?*

The first of the Living Books range of titles, *Just Grandma and Me*, was released in January 1992. Since then, they've all followed pretty much the same format, applying the Living Books treatment to a variety of different stories. The Living Books are largely responsible for revolutionising the education market, proving that educational software can have high production values, be fun and easy to use yet offer very obvious benefits to your child's education. As you'd expect of any successful formula, it's been copied to death and one or two titles from other publishers are now arguably better than



the Living Books releases. Note that although Living Books has become synonymous with a very particular style of children's books, the name Living Books has been trademarked. Thus packaging can't describe something as a Living Book even though that may be the most apt description. That doesn't stop reviewers, though.

The books feature about 12 pages showing a brightly coloured cartoon scene (admittedly the one shown here doesn't look too great in black and white). Alongside are a few short sentences which tell the story. These are read out loud in cartoony voices. The child can then click on bits of the picture and things spring to life. For example, click on the dog and he'll speak to you. Click on someone's front door and a character usually comes out and speaks to you. Bushes may spring to life, vegetation may start singing, even ladybirds sing to you. Your children are learning alongside you, seeing the words appear on screen and developing an understanding of spelling and sentence construction.

The Living Books company is based in America. Until very recently, Anglicised versions of these titles weren't available but now great Wind in the Willows-style voices enhance the titles even more. There are usually options to change the voice to French or German and these can be useful for older kids learning foreign languages. Believe me, when you start tinkering with a Living Book title, it doesn't matter how old you, are you can't leave it alone – that foreign language excuse often comes in handy!

## Running Gags

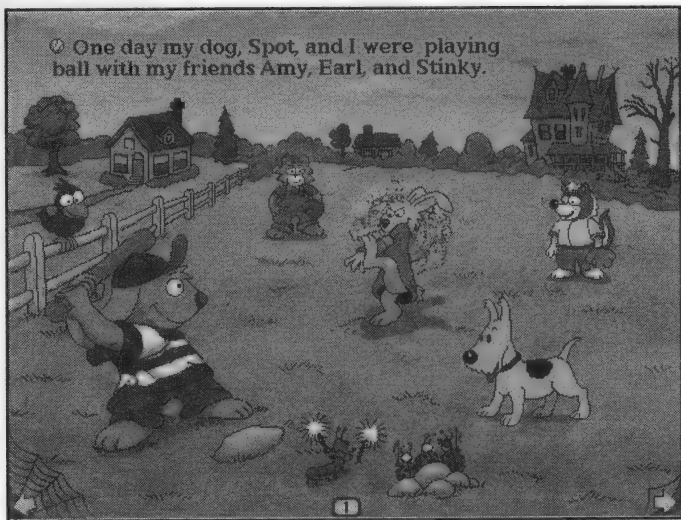
Several of the Living Books titles have running gags in the form of characters or animations that repeat themselves from page to page. There's the dart to find on each page of *Arthur's Teacher Trouble* and the Zipperump-a-zoo (no clues) in *Little Monster at School* to name but two.

## Actions speak as loudly as words

Jack Prelutsky is the author of 30 books of comic verse and in the Living Book title, *The New Kid on the Block*, his poems are brought to life by line drawings, animations and a tough, knockabout humour. This title would lend itself well to children with learning difficulties. It's often easier to associate a particular word shape with an action rather than merely with its sound.

### *What can I buy?*

Whatever you want, you got it. The problem is knowing what you want. All the traditional stuff is catered for by commendable but nonetheless obvious software releases. It's the innovative uses where it all gets interesting, and it's only by exploring that you can discover what's really going on. Here's a selection of some educational packages worth taking a look at. Some have been reviewed in the pages of *PC Guide* and others (as indicated) may not have been released at time of purchase (in other words, don't blame me if the idea turns out to suffocate from poor programming or limited imagination).



Atmospherics abound in this, one of the very best Living Books from the Broderbund stable. Is there really a ghost in the house, or is it all in the imaginations of the characters? Find out in *Harry and the Haunted House*.

## Harry and the Haunted House

**From:** Living Books, 01753 620909

**Cost:** Around £30

**For:** 3-10 year olds

This is one of the best in the *Living Books* range. It's got a great story and many amusing moments to chuckle over. In *Harry and the Haunted House*, Harry and his friends visit a haunted house to get their baseball back after a particularly fine over-the-boundary shot. The following screens take you through the plot, leading Harry and his mates into the house. As you click on objects, ghosts spring into every scene. As light relief there's music provided by three ladybirds who strut

their stuff from screen to screen, and a variety of syncopated domestic fixtures and fittings. From opera-singing portraits to canned tomatoes seized by rhythm and blues, they're bizarre and hilarious.

### **Eyewitness Encyclopaedia of Nature**

**From:** Dorling Kindersley, 0171 8365411

**Price:** Around £50

**For:** 10-16

You can't write an article about education without mentioning *Living Books* and Dorling Kindersley. Dorling Kindersley releases are aimed at kids from 3 years and upwards. Like *Eyewitness Encyclopaedia of Nature*, they usually take the form of an encyclopaedia armed with interesting facts scattered among animations and sound. In this title there are high-quality video clips and realistic sound clips. It's the high production values and a vast array of software covering all sorts of subject matter that has helped make DK one of the leaders in educational software.

In *EEN* the main screen shows a desktop, and you explore the subject you want by clicking on relevant areas. There are specimen drawers, colourful species charts and an ornate sextant which takes you to 10 different habitats, from the mountains to the sea and the coast. Each habitat section is centred around a panoramic picture full of animals and plants. In the Australian bush, for example, you get a commentary on the arid grass land and a continuous loop of outback sounds. As with many classroom nature posters, one

of each creature has sneaked out to sun itself, even if, like the wombat, it's nocturnal. The encyclopaedia's coverage is broad. There are extensive sections on climate, prehistoric and microscopic life, as well as some impressively up-to-date environmental issues.

Other Dorling Kindersley titles include. . .

- *My First Incredible Amazing Dictionary*, aimed at 3-7 year olds and featuring illustrated dictionary words with sounds and animations,
- *The Ultimate Human Body*, aimed at anyone over nine, enables you to walk around inside a human body.
- *The Way Things Work* targets anyone over seven with a wealth of knowledge about scientific inventions going from antiquity to the silicon age.

### **Chadwick and the Sneaky Egg Thief**

**From:** Guildsoft, 01752 895100

**Price:** Around £30

Earlier I touched on the fact that there have been many imitators of the *Living Books* formula. This is one of them and though the illustrations may not be up to the same standard as some of the *Living Books* titles, this can give them a run for their money in terms of some of the extra features.

As you'd expect, *Chadwick* enables kids to watch a humorous story unfold or you can interrupt the action between pages to click on characters and backgrounds. In response, each item comes alive with mostly unexpected and amusing results. The innovation the puts *Chadwick* above the



A superb program which helps your child to create images on screen. With a story to accompany the learning aspect, *Chadwick and the Sneaky Egg Thief* is arguably better than many of the Living Books by Broderbund.

*Living Books* series, though, is the fact that each of the 20 pages can be coloured using a variety of paints, crayons, patterns and shapes. When you've finished creating your masterpiece, you can watch the scene again but this time all the animation features the styles you've created.

### **Star Act**

**From:** Digital Pictures

**Price:** TBA

The aim of this one is to give kids the ability to create their own movies. Using an array of movie clips, kids can construct their own movies, setting out the storyline however they want.

Sound effects and speech are also available, but with an additional microphone kids can record their own voices over the top. I saw the title being demonstrated at a show recently and some bright spark had set it up to show a grinning cowboy settling into a bale of hay followed by a woman bathed in an outdoor pool. He added some speech over the top but I can't repeat it. If nothing else, it continues to demonstrate the fun that adults get from educational software.

### **Romeo and Juliet**

**From:** Attica, 01865 7913460

**Price:** Around £40



Shakespeare comes to the PC with this multimedia version of his classic love story. *Romeo and Juliet* is one of the better adaptations of classical literature available on the PC.

Transporting Shakespeare's star-crossed lovers from the stage to the monitor is not the easiest of tasks, but the combined efforts of Attica, HarperCollins and the BBC have produced a superb program. Speech and video from the BBC production unit complement the text perfectly while the wealth of background information contained in this lavish interface makes *Romeo and Juliet* perfect for education. Hypertext links (highlighted pieces of text you can click on to explore other areas) take you from Tchaikovsky to Gielgud, Jonathan Miller to Germaine Greer, but all the time the focus remains on Verona's doomed teenagers.

## **Dorling Kindersley vs Microsoft**

We ran the section on tigers in *Eyewitness Encyclopaedia of Nature* and in Microsoft's *Encarta* CD-ROM. In *Encarta*, there's a lot more text and two different stills of tigers, but in the DK title there's an excellent video of a tiger family and pop-up key facts on the species. Both had roaring tigers.



# *Chapter 5*

## **Desktop publishing**

**E**very club and society has its own newsletter; every local parish has its own parish magazine; and every school has its own magazine. These leaflets and pamphlets are put together with a type of software which enables you to place text, headlines and pictures together in an attractive manner – this software is called desk-top publishing software.

Capable of running on any PC that has Windows installed, the majority of desk-top publishing (or DTP) software grants you the power to produce magazine-quality documents without the overheads of a publishing house (indeed, this very book has been produced on PCs with a DTP program called QuarkXPress). You need a high-quality printer (either black and white or colour) to make the most of the software, but even with a cheap dot-matrix or bubble-jet printer (costing no more than £200), you can produce publications every bit as good as a parish magazine or club newsletter.

### Microsoft Publisher

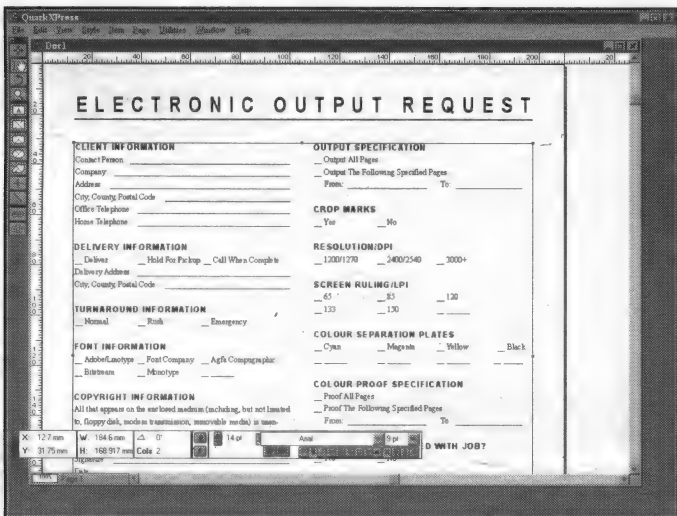
£115, Microsoft, 0345 300 125

At such a low price, you'd expect Microsoft's DTP program to be lacking on features, but you couldn't be further from the truth. Though its ability to handle colour is sadly lacking, all of the functionality is there to create stunning looking publications. What's more, Microsoft has made every effort to make it easy to use and instantly accessible. A must if you're strapped for cash.

100

10

10



Power, but at one Hell of a price – *QuarkXpress* is the best DTP program money can buy; it's just a shame that you need more than £1,000 to buy it.

## PageMaker Classic

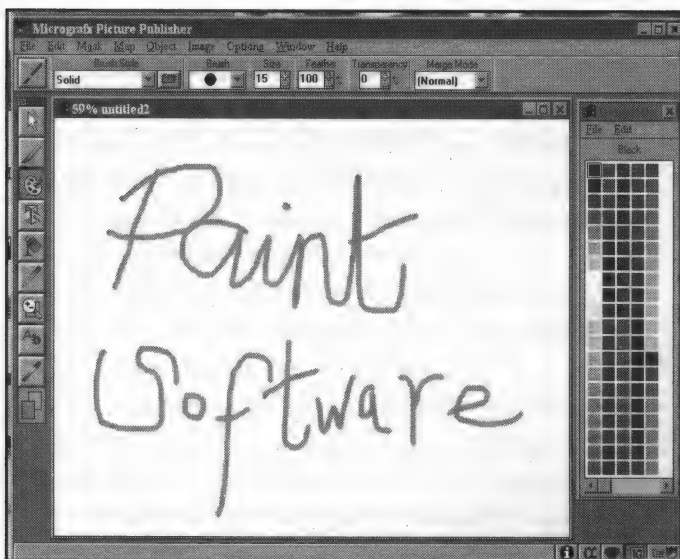
£71, Adobe Systems, 0181 606 4000

Cheap and cheerful may be an overused phrase, but it's one that is entirely apt for describing Adobe's *PageMaker Classic*, a cut-down version of the more expensive *PageMaker 5.0*. The latest full version, *PageMaker 6.0*, has an RRP of £470). It's not that intuitive to use, and neither is it particularly powerful, but if all you're interested in doing is creating flyers, posters and short newsletters, then it does the job perfectly well, thank you very much.

# *Chapter 6*

## **Graphics**

As PCs have gotten faster and prices have tumbled, the astonishing visual effects that were once the exclusive domain of television production studios have made their way into the home. Your average drawing and painting package now pales into insignificance next to the astonishing things you can do in a 3D or morphing packages (morphing is the effect that appears on television a lot, where one person changes gradually into another). In issue one of *PC Guide* we delved into 3D and then in issue two we ran a big morphing feature and gave away some morphing software on the CD-ROM version.



Here we're using a paint program – it's just like painting for real, using the mouse as a 'brush' and the screen as the 'paper' or canvas.

## 2D or 3D?

There's a big difference between graphics programs which are '3D' and those which are '2D'. Creating picture with 2D program is just like painting onto a piece of paper, where your screen is the paper; 3D program require you to create a 3D object as a wire-frame, more like modelling with clay and then painting the model.

## Windows or what?

Just about all graphics programs require Windows to work – that's because Windows is specifically designed as a 'graphical environment'. The one exception in those programs we've looked at here is, interestingly enough, *3D Studio* – the most advanced, and the most expensive PC graphics program.

## Take a peek

To view your graphical creations on screen without having to load up your actual graphics creation program, you must instead use a graphics viewer program. One of the best, available as shareware, is Paint Shop Pro. Get it from the Digital Workshop on 01295 258335.

### *How much can I expect to pay?*

Graphics software is all over the place in terms of price and features. You can pick up software free on magazine CD-ROMs or you pay over £2000 for state-of-the art 3D software.

Typically, a £60 price tag can give you something that's both fun to use reasonably professional. The difference in price

tags has a lot to do with the PC's history. Years ago, when you and I couldn't afford even a basic PC, big graphic companies wanted professional graphics software. The programmers that made it wouldn't get too many sales and development time was long and expensive so the software was sold for extortionate prices. Now that PCs have become affordable and the set-up in your living room isn't far off the set-up in the graphic artist's studio, more of us have become interested in graphics. A new set of publishers has sprung up to serve this home market but with more sales their prices can be cheaper. The home software is becoming more and more diverse as time goes on and it's easily possible to pick up a piece of software under £200 that can rival something three times its price.

### *So how do I decide what to go for?*

Again, the best way is to read reviews but if that's no good, check out the features list and scan through the manual to discover what's on offer. Manuals for graphics software can be huge, gargantuan tomes about as penetrable as the tower of London – especially if they're aimed at the professionals. They can also be straightforward, step-by-step affairs, so have a look at the manual and make sure that it's easy enough to follow.

### *What other types of graphics packages are available?*

Try fractal landscaping for something a bit unusual. Using the



mathematics of fractals, you can create immensely realistic landscapes. You can even construct animations so that you can set up a landscape and then fly through it, soaring over valleys and trees, exploring lakes and snow-capped mountains. *VistaPro* is the best piece of software in this field, offering features to create landscapes on strange planets when you get tired of Earth, and at £120 or less, it won't break the bank, either. We gave away version three free with the launch issue of *PC Guide* (CD version only). We've since sold out of that issue, but for details about the latest version contact *VistaPro*'s UK distributors Meridian on 0181 715 8866.

### *What's out there?*

Here's a varied selection of software that can give you an idea of the prices you can expect to pay and the features on offer.

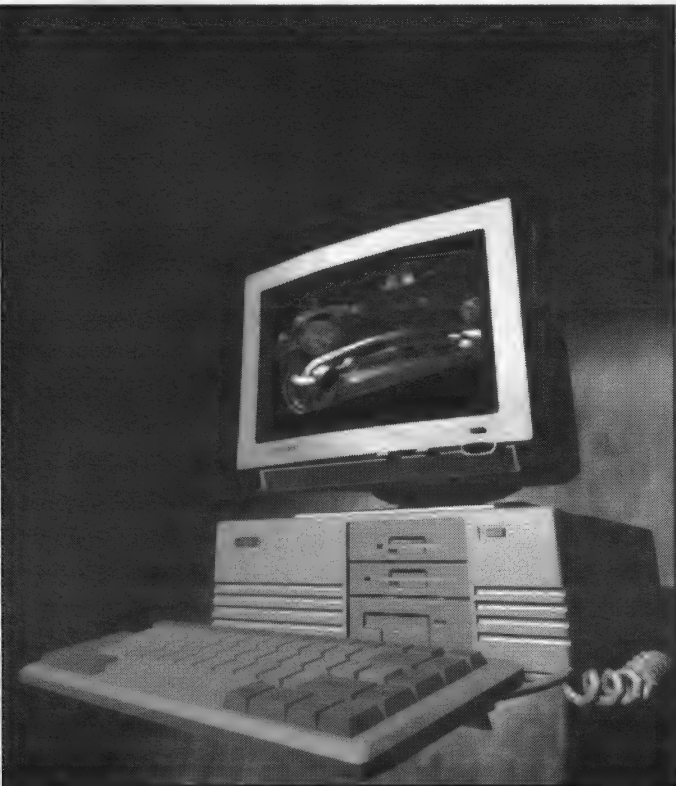
#### **3D Studio**

**Price:** £2,643

**From:** Autodesk, 01483 303322

Okay, so you've got to win the lottery before you can afford this but it gives you an idea what to aim for. This is the definitive package for 3D modelling on the PC. The price tag may seem hefty but the software offers professional quality output of the likes used to create special effects for TV adverts and full-budget movies. What makes *3D Studio* ideal for the graphic artist is the way that it can animate 3D graphics to produce better-than-cartoon quality films, without having to go through creating each frame yourself. You tell

*3DS* what you want it to do with your creations, it goes away and does it. At this price nothing can touch it, though the price is still out of reach for most home PC owners – so, one for when you win the lottery, eh?



A whopping great £2,600 may sound like a lot for what amounts to a graphics and animation program, but *3D Studio* is an amazing package, capable of producing special effects as great as those you've seen in films like *Terminator 2* and *The Mask*.



**This is 3D Studio in use – you create wire-frame objects and then wrap around ‘textures’ to make them appear real.**

## **Painter 3.0**

**Price:** £375

**From:** Letraset Software, 0171 928 3411

A program that combines a paint package with a photo-retouching facility. It's not the most user-friendly piece of software and this, coupled with the price, makes it more suitable for professionals – what do you expect from Letraset? The advanced array of editing tools make it ideal for those of you who enjoy chopping and changing your own scanned-in photographs – you can do anything to the photo from changing the colour of your husband's eyes to changing his

face altogether! And, whatever changes you end up making, there are no joins or glitches which give away the fact that the image has been doctored. Good, though expensive, fun.

### **Fauve Matisse**

**Price:** £101.95

**From:** CGS Computerbuild, 0181 679 7301

A superb package combining a vast array of paint functions and photo-editing facilities, and well worth considering at this price. Features on offer include a number of pencil, brush and stylised tools which enable you to replicate all manner of traditional illustration media – oil painting, charcoal, pastel...



On a more traditional level is *Fauve Matisse* – this enables you to recreate paintings and drawings which you usually only ever see in art galleries.

The list goes on and on. The interface is highly intuitive, so getting to grips with the program quickly is a breeze, though mastering it is far from easy.

### **Art Centre**

**Price:** £40

**From:** Electronic Arts, 01753 549442

Art doesn't have to be for the adults only. Here's a paint program designed to stimulate the budding artist in younger children. Suitable for three year-olds and above, this program is designed to make art fun for kids, giving them a quick 'n' easy way to produce their own paintings and drawings. Maybe a bit too simplistic for children over the age of 12 or so, it's ideal for you children if they're that much younger.



Once you've created your masterpieces you can then go back and view them using a viewer program such as *Paint Shop Pro*.

# *Chapter 7*

## **Productivity software**

**Y**uck, it's such an awful word, 'Productivity'. It covers word-processing software, spreadsheets, databases and accounting packages – basically all the boring stuff the PC was designed to do in the first place. The thing is, it isn't so boring any more. Word-processing software is very varied and with packages like Microsoft Word pushing forward the boundaries, it's almost a joy to sit and use this kind of productivity software (almost). The same goes for accounting software which can take care of your books and even prepare your tax return.

### *How much can I expect to pay?*

Prices vary tremendously. Anything from £20 to well over £200 is about the range, depending on what you want to do. Check that the software you buy is appropriate for your uses. Many of these financial packages are aimed at businesses (hence the lofty price tag). Software targeting the home market tends to be cheaper.

## **Office on a CD**

Corel has released a CD-ROM containing tons of useful stuff for the office that already has everything. The contents are refreshingly varied – clip-art, sound files, scanned photos and fonts, a dictionary, encyclopaedia, quotations and Almanacs, business graphics and system diagnostics programs, a time planner and comms software galore. The CD-ROM costs about £100. Contact Corel, %01703 814142 for more details.

### *What's available?*

Packages fall into different areas, depending on what you want to do. Databases can look after information for you, sorting it to meet your demands. A list of names and addresses is a simple database. Spreadsheets look after finances and enable you to test out hypothetical business suggestions – for example, the budget for this book was contained in a spreadsheet so that we could play around with different paper sizes and costs to see at a glance what impact such decisions might have on the book's profitability. Then there are finance packages like some of those listed below. These can sort your books for you, prepare your tax return or keep track of your cash. Word-processing software looks after the correspondence side of your life, enabling you to draft letters and manuscripts. You can even carry out batch mailing – a process by which you can repeat the same letter (suitably amended) to loads of different people at the touch of a button. Addresses and names are updated automatically within each letter. Here's a look at a handful of packages. . .

### **Microsoft Word v6**

**From:** Microsoft, 0345 300 125

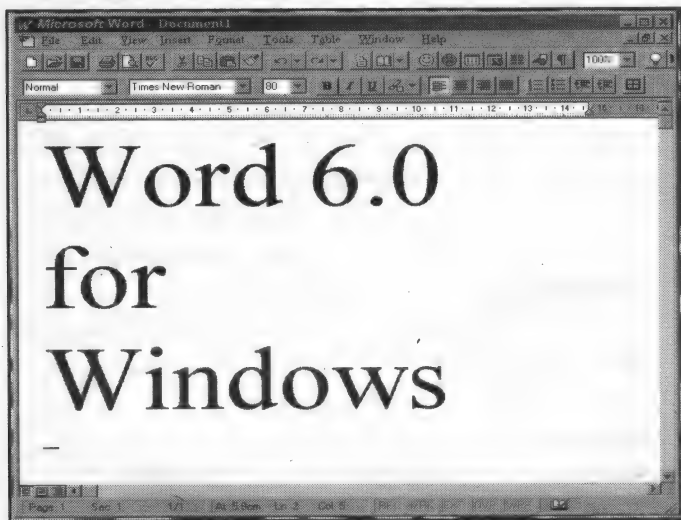
**Price:** £195

The ultimate in PC word-processors. Besides spelling, thesaurus and grammar checking options, *Word 6* can even correct mis-spelt words as you type. The price tag for *Word 6* is a bit on the high side but this is the only word-processor you'll ever need.



## What's yours got?

Word-processors are getting bigger, better and faster. Undoubtedly the best one on the market at the moment is Microsoft's Word 6, which sets the standards others aim to follow. Features such as a spelling checker and thesaurus option have been around for a while but Word 6 supplements these with a grammar checker and an auto-correct function which replaces commonly misspelt-spelt words as you go along – ideal if you're always getting the 'h' and 'e' the wrong way around when spelling 'the'. Other features include the



Enter a word incorrectly and *Word 6* automatically replaces it with the correct spelling. You can even use the same feature to give you keyboard shortcuts to commonly typed words. For example, you could set up *Word 7 for Windows 95* so that every time you type PCG, the words PC Guide appear in the document instead. Handy.

ability to import graphs, tables, charts and pictures.

When buying a word processor, make sure it offers the features you want. While Word 6 certainly offers just about anything you care to imagine (we're assured that Word 7 will be able to make the tea), remember that you're paying for many options you're unlikely ever to need. Good though the graphing features might be, how often have you wanted to use graphs in a document anyway? And while a readily accessible thesaurus may be helpful, will it replace your Roget's or Chambers version? Get too carried away with a snappy features list and your wallet will feel the strain.

### **Quicken 4 for Windows**

**From:** Intuit, 0181 990 5500

**Price:** Around £40

This market-leading finance package enables you to set up bank and Visa accounts within minutes, and five minutes later you've scheduled your standing orders and direct debits.

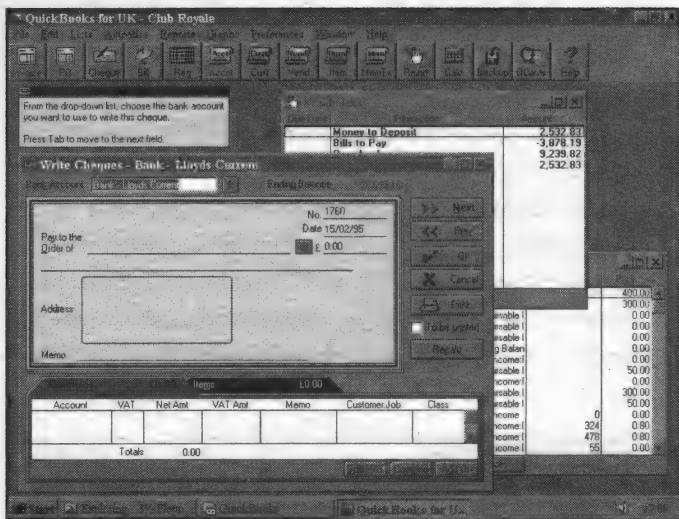
*Quicken* also handles foreign currencies, investment portfolios and mortgage accounts. An excellent and flexible utility.

### **QuickBooks 3**

**From:** Intuit, 0181 990 5500

**Price:** Over £100 (just)

Aimed at small businesses, *QuickBooks* claims to simplify book-keeping by offering a powerful and accurate accounting service, but without the need of an expert. Installing it is a



**QuickBooks** is aimed at small businesses, enabling you to balance your books. The information generated can be imported into **QuickTax** to enable you to get those tax demands off early.

breeze and the manual guides you skillfully through. The number of options is vast and the graphing and charting facilities are also impressive.

## QuickTax '95

**From:** Intuit, 0181 990 5500

**Price:** About £50

*QuickTax* takes you through the form-filling part of your 1995 tax return. Each question is accompanied by full help, which tries to explain the accounting jargon. There's no manual (apart from an installation guide), and it can only be used once because forms change each year. This makes the asking

**QuickTax** includes some handy tips to help you legally reduce your tax demand. By answering a series of questions put to you by the software, you can quickly and easily get that tax return sorted out.

price seem high, although *QuickTax* is powerful and simple to use, even though it's still loaded with horrible tax jargon that doesn't make any sense to anyone.

### Loan Analyst

**From:** GSP, 01480 496575

**Price:** About £20

Compound and variable rates of interest often cause confusion when you take out a loan. This helps you make the most of your money by enabling you to evaluate your financial position. You can use the software to work out repayment periods, interest rates, monthly or annual repayments.

## Professional Interests

Software publishers who once used to develop exclusively for professional consumers are now developing for the home PC market. They've been forced to reduce their prices, often releasing cut-down versions of more complex professional orientated software aimed at the home market and in a price bracket to match. For example, you can now get a cut-down version of Fauve Matisse, called Fauve Matisse Lite which sells for well under half the price.

## Software for free (maybe)

Many simple office-related programs can be picked up from shareware libraries. Very simple word-processors and databases are extremely common. Shareware libraries distribute software free of charge (or for a nominal fee). If you like the shareware software and find you use it regularly then you are required to send a registration fee off to the authors. It's in your interests to send off the registration fee because you'll often receive free updates or information about other upcoming software. Most shareware libraries now sell CD-ROMs packed to bursting with loads of shareware programs. If you're interested, scout around the classified ads for details of shareware libraries. Failing that, call PDSL on 01892 663298.

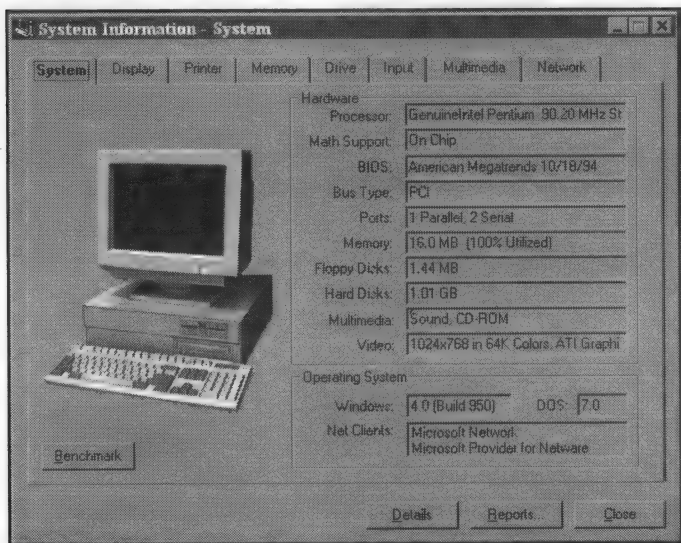
# *Chapter 8*

## **The weird and the wonderful**

**O**f course PC software is much more diverse than these few categories might lead you to imagine. As I've suggested already, most of the innovative new software is emerging on CD-ROM and tends to fall under the banner of Multimedia. But you don't need a CD-ROM drive to be able to enjoy other weird and wonderful applications.

## Keep your house in order

An ideal piece of software which helps you organise your PC (in terms of the files on the hard drive and the Windows desktop) is PC Tools for Windows version 2. For just £117



This handy readings bar which comes with Norton's Utilities for Windows 95 tells you about how your system is performing, and whether you can expect the thing to crash at any point!

from Symantec (0181 848 1414) you get a full suite of specialised tools which make your PC more efficient and easier to use.

### Or if you use Windows 95...

Get hold of Norton's Utilities for Windows 95 to help you keep your Windows 95 based system in check. All manner of tools help to protect and organise files, prevent crashes, and protect you from viruses. It costs £99 from Symantec (0181 848 1414).

Stress-relieving gadgets are one bizarre application. There are a couple of different sorts. For a mere £30 you can get hold of Endorfun (contact Time Warner Interactive on 01604 602800). This unusual piece of software gives you games to play while sending out positive subliminal messages that supposedly relax you as you play. Very unusual. But even more unusual is the The Synergizer. This device comprises a pair of glasses, a plug-in card and a piece of software to play music and control the glasses. The software controls red LEDs in the glasses, which flash in accompaniment to music. It's more likely to induce a headache than a state of nirvana but you still have to part with £399 for the privilege – contact Life Tools on 01625 502602 if you're interested.

Other software can help you look after your PC. There's software available to look after your hard drive and shuffle its contents around, speeding up the rate at which software is



accessed. Then there's software that can recover lost files or give you a diagnostic report on your PC's state of health. Other software can help you keep track of files, or delete files that haven't been used for a long time.

There's so much going on in the software market today that the only way to keep track of it is to keep an eye on the shop shelves – oh, and keep checking out magazines (especially *PC Guide*) which always update you on the innovative ideas emerging.

## *Chapter 9*

# **Do your own trouble- shooting**

**L**ife with the PC isn't always a bed of roses. When things go wrong, what can you do? Here's a selection of tips which should hopefully put you on the right course of action.

## CD-ROM & multimedia

Here's a helping hand with some of the problems that can occur when you're dealing with CDs.

*I've already installed Video for Windows, but when the Haldeman Diaries starts, it says that it can't play videos because QuickTime isn't installed. Say what?*

QuickTime is a rival product to Microsoft's Video for Windows, and does pretty much the same job. You will need to install QuickTime too. This can normally be done through the program's install routine or, failing that, there will more than likely be a qtw subdirectory on the CD, with a setup.exe file which you should run.

*Feeling decidedly creative one day, I wrote a piece of music on my PC as a MIDI file, which, to be modest, sounded damn excellent. I took the file to a friend's machine, though, and it sounded absolutely awful. What's gone wrong?*

MIDI files don't record the sound of the music, merely the pitch and duration of a note, and a rough description of the instrument. Your friend obviously has an inferior soundcard, with some dodgy instrument samples. There's no getting

around this (other than by making him upgrade), but you might have more success if you save your music as a Wave file (they have the .wav suffix), which records the actual sounds rather than the notes.

*I seem to have two drivers controlling my CD-ROM drive, one called slcd.sys in my config.sys file, and one called mscdex.exe in autoexec.bat. Do I need both of these?*

Indeed you do. The first one is the actual **device driver** for your CD-ROM. Mscdex stands for Microsoft CD Extension – it's an extra file which comes with DOS and enables you to access the CD-ROM drive through DOS and Windows.

*How can I save files on to my CDs?*

You can't – at least, not very easily. CD-ROMs are read-only, which means that you can look at the data on the disc, but you can't change it or add to it, just as you can't record your favourite Abba tracks on to an audio CD. You can purchase CD writers though – they look like large CD players, but can burn data into a special CD, albeit only once. Expect to pay upwards of a grand for this pleasure, though.

## Memory

You know you've got the memory, you know the software SHOULD run – but you still get out of memory errors...

*How can I create my own PC boot disk?*

Insert a blank floppy disk into drive A, and from DOS type: `format /s a:` [Enter]. Then type: `copy c:\autoexec.bat a:` [Enter], followed by: `copy c:\config.sys a:` [Enter]. Use DOS Edit to remove superfluous lines from the versions of these files on the floppy disk, but make sure you leave in anything pertaining to your soundcard, CD-ROM drive if the game is CD-based, and memory programs, such as `himem.sys` and `emm386.exe`.

In particular, try removing the `smartdrv` line. Finally, leave the disk in the drive, and reboot your machine.

*That's all well and good, but how come these DOS4GW games don't run half the time?*

DOS4GW works pretty close to your hardware, so similar programs, such as `himem`, `emm386` and Windows often get upset when it muscles in on their territory. If you are having problems, don't run the game through Windows, and temporarily remove the lines that load `himem` and `emm386` in your `config.sys` file. You don't have to delete them, just add the word `REM` before each line to have them ignored.

*What's this virtual memory stuff that people keep talking about?*

Most commonly seen in Windows, virtual memory (otherwise known as a swap file) is an area on your hard disk that can be used to store information when your RAM gets filled up. Windows decides which information you don't need at the moment and swaps it out to disk, freeing up some more of

your PC's physical memory.

*When I try to load a large picture in Paint Shop Pro 3, it complains that it hasn't got enough contiguous memory.*

Like a lot of graphics programs, *Paint Shop Pro 3* likes to store a picture in one location in memory. If it can't find one big enough, it reports a lack of contiguous memory (in this context, contiguous is just a fancy word for continuous).

The only solution is to shut down any other programs that are running and try again. If this doesn't work either, restart Windows and try loading the picture before doing anything else.

## Operating systems

When something goes wrong with DOS or Windows, here's where to turn...

*I know that DOS isn't perfect, but there seems to be quite a lot there. How can I find out about each of the commands?*

DOS 6 includes an on-line help system (that is, the help files are stored on your computer), as do subsequent versions. You can get help on a specific command by typing: help followed by the name of the command, for example help copy. For less comprehensive help, type the command name followed by /?, for example copy /?.

*When I type: win [Enter] I get a message*

*saying "Bad command or file name".*

Whenever you get this message, DOS is effectively telling you that it doesn't know what you are talking about (in other words, what's this 'win' thing when it's at home?). The simplest solution is to change to your Windows directory, by typing: `cd \windows [Enter]`, before you type: `win [Enter]`. Alternatively, to create a more permanent solution, check out the next tip.

*Okay, so I've got Drivespace installed, and I've nearly filled all the free space again. It says I've got 12Mb left, but when I try to install this 10Mb game, it gets nearly all the way through, then tells me I've run out of disk space. What is going on?*

DriveSpace reckons you've got 12Mb, because it probably has 6Mb left, and believes it could fit 12Mb worth of files in it. Some files, though, don't compress as well as others, so what is being reported is that the 10Mb game won't compress into a 6Mb space.

*When programs crash, I get worried about turning the PC off and back on again. Can doing this damage my machine?*

Yes, it can if you do it too quickly, so wait a few seconds before switching back on. Alternatively, you could hold down the Ctrl, Alt and Delete keys to reset your machine.

*When I type: `dir [Enter]` all the information*

*disappears off the screen before I've read it.*

You can make the directory listing pause after each screenful by typing: `dir /p [Enter]` instead. There are loads of other ways you can customise the `dir` command. Type: `help dir [Enter]` at the `C:\>` prompt to find out about them.

*I wouldn't mind making this dir /p thing permanent. Can I?*

Of course, but doing so involves editing your `autoexec.bat` file again. Type: `edit c:\autoexec.bat [Enter]`, and on the first line type: `SET DIRCMD=/p [Enter]`. You can add all your favourite switches (as they are known) to this line. For instance, `SET DIRCMD=/p/oneg` will pause after each screen, list directories first, and then sort the files alphabetically, firstly by name, and secondly by extension (the three letters after the full stop).

## Windows

*The colours seem to switch around when I switch between applications. Is there a problem with my video card?*

Probably not. What is happening is that both applications are running in 256 colours, but are using a different selection of colours (called a palette). Your card is only able to display 256 colours in total, so Windows switches between the two palettes as you change programs. This can lead to some dramatic side effects, but you should find that the image in the active program is displayed correctly.



If this bothers you, and if you have a card that can handle it, try increasing the number of colours that can be displayed – 65,536 (sometimes referred to as 64k colours) should do nicely, but some cards will go up to 16.7 million.

### *What's a good size of swap file to have?*

There's no hard and fast rule, as it all depends on what you want to do in Windows. The more programs you want to have open at once, the more disk space you should allocate. As a rough guide, between 10Mb and 20Mb should be plenty.

### *I'm trying to set my swap file to 12Mb, but Windows will only let me set up a 4Mb one.*

Your hard disk is never going to be an adequate substitute for real memory, but to try and make it as fast as possible Windows stores the swap file in one single area of your hard disk. If Windows claims that you can only have a 4Mb swap file, this means that the single largest area of free hard disk is 4Mb in size. Assuming that the total amount of free space is greater than this, you can create a larger block by quitting out of Windows and typing: defrag [Enter] at the C:\> prompt. Read the previous section to find out more about running Defrag.

### *What are these General Protection Faults I keep getting?*

So that Windows can run more than one program at once, each application is given its own bit of memory to use. If a

program tries to use a bit of memory that has been given to another program, Windows panics, stops the offending application, and throws up a GPF. Often hitting the Ignore button repeatedly will get you out of the inevitable sticky mess, and if so, you should save your work as soon as possible, then shut down Windows and restart.

*I'm confused! I installed a shareware program, which I have since deleted, and which used to run automatically when Windows started.*

*Now when I turn on my machine, it says it can't find the program. How can I stop it looking? There is no icon in the StartUp group.*

Windows 3.0 didn't have a StartUp group, and programs were run automatically by adding a line to a file called **win.ini**, which is a bit like an autoexec.bat file for Windows. It's possible that the shareware program altered this. To check, open up the win.ini file in *Notepad* – you'll find win.ini in the c:\windows directory. Within the first 10 lines will be two that start run= and load=, both of which might have some program names after them. Simply delete the name that refers to the old shareware program and save the file.

*I like to have the Windows clock running the whole time. How can I get it to start at the same time as Windows?*

Versions 3.1 and above of Windows have a Program Manager group called StartUp. Any programs whose icons are stored in

this group are run each time Windows is started. To get Clock to run automatically, drag the icon from Accessories into StartUp. Dragging in Windows means clicking and holding the mouse button down, moving the selected object across the screen, and then releasing the mouse button.

*I'd like to bring up the Windows Calculator quickly, rather than having to find the group and then double-click on the icon. How can it be done?*

You could assign a hotkey to the Calculator, so that it automatically starts when you press a certain key combination. Click on the calculator icon once, and select Properties from the File menu in Program Manager. In the dialogue box that appears, click inside the Shortcut box. You can now press whatever key combination seems appropriate, although Windows will insist that it includes the Alt and Ctrl keys (this is to make sure that your shortcut doesn't clash with any of the menu shortcuts). In this case, Alt + Ctrl + c seems like a reasonable idea. Click on OK to accept your changes, and now, whenever Program Manager is uppermost on the screen, you can press your chosen combination to start Calculator. Indeed, you can assign shortcuts to all your favourite programs – just make sure you choose a different letter for each one.

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